George Mason University CERT
Standard Operating Procedures for Radio Communication

Introduction

These procedures apply to the Motorola T5950 GMRS/FRS radios supplied by George Mason University to members of the university's CERT. The procedures contain the protocols that will be used for setting channel frequencies and subcodes (interference eliminator codes), the allocation of those channels to various team functions, and guidelines on proper radio communication. A summary of the instructions for changing various settings on the radio and using the radio are also included.

The procedures presented here are guidelines for radio usage during drills and actual responses, and they serve as the default rules for channel selection, etc. Additional channels may need to be assigned, or other procedures may need to be modified, based on the specific conditions that occur during a particular response. Those decisions will be made by the Incident Commander as necessary at the incident scene.

Each CERT member is expected to bring their radio to drills and actual responses. The NiCad batteries supplied with the radio should be kept charged and/or AA batteries (3) should be available. The George Mason Safety Office will also bring two extra radios for the Incident Commander. One is to be used as needed for backup or for communication on two channels without scanning. The other radio will be set to Channel 7, Subcode 53 to monitor emergency situations that might arise for a team member.

Since only channels 8–14 have transmission power of 0.5 watts, we will limit our use to those channels. The other channels on the radio have 1 watt of transmission power, which requires a license from the Federal Communications Commission for use. They will not be used except in exceptional cases, as described under Channel Allocation.

The T5950 radios have 99 subcodes for helping to eliminate interference. Most other models of GMRS/FRS radios have only 38 subcodes; the radios initially issued to CERT by Fairfax County have 0 subcodes. The subcodes that will be used by George Mason CERT will be in the range 39–99 to provide the maximum amount of isolation from other users. The specific subcode that we will use is specified below. To the extent possible, we will use the same subcode for all channels to allow effective scanning of channels and broadcasting calls to radios.

The radios are the property of the university. If a radio is lost or damaged at any time other than during an authorized CERT event—training, drill, or actual response—the radio must be replaced at the individual's expense. If a radio is lost or damaged during an authorized event, it will be replaced at the university's expense.

These procedures will be updated as needed based on experience, changes in equipment, etc. The decision to make changes to the SOP will be made by the officers of the George Mason CERT, and the team leader will appoint someone to make those changes.

Channel Allocation

Channel 8, Subcode 53 – Operations

This is the initial channel to be used by all CERT members. All radios should be set to this channel when arriving at the staging area or incident scene. The Incident Commander will use this channel for communication with those people at the incident scene that he/she needs to contact directly. All CERT members will remain on that channel until they are explicitly told to change to another channel. In many cases, this will be the only channel needed for communication among team members.

Channel 10, Subcode 53 – Search and Rescue (SAR), Recon, RIT

This channel will be used if it becomes convenient to separate communications to/from search and rescue or recon teams from other traffic. Use of this channel will generally be for communications between the SAR Group Leader and the search and rescue or recon teams or between the teams deployed at the incident scene. The SAR Group Leader will also use this channel to dispatch the Rapid Intervention Team (RIT) as needed. This channel will not be used until authorized by the Incident Commander.

Channel 12, Subcode 53 – Medical

This channel will be used if it becomes convenient to separate communications to/from the medical team from other traffic. Use of this channel will generally be for communications between the Medical Group Leader and the various medical teams performing triage, treatment, and transportation of victims. This channel will not be used until authorized by the Incident Commander.

Channel 14, Subcode 53 – Command

This channel is only for use between the Incident Commander and the university's Emergency Operations Center (EOC). It will not be used for any other communication. Requests by CERT for support by other groups, such as Physical Plant, Food Services, etc. will be made through the EOC on this channel.

Channels 9, 11, 13, Subcode 53

These channels will be assigned by the Incident Commander on an as-needed basis to provide communication with other functional groups of team members that are defined at the incident scene. These channels will not be used until authorized by the Incident Commander.

Channel 7, Subcode 53

> This is a 1 watt channel, which will not be used normally by CERT. It should be used only when a person finds themselves in a truly emergency situation and cannot get a response on the normal CERT channels. This channel will be monitored by the Incident Commander.

The radios issued by Fairfax County during the CERT training classes do not have any subcodes. This corresponds to Subcode 0 on the George Mason radios. Therefore, when our team interfaces with other teams that are using County-issued radios, we must set our radios to the assigned Channel and to Subcode 0.

Protocol for Terminology in Communications

Plain English will be used when communicating on the radios. The '10 codes' will not be used as they are unfamiliar to most people, and there are various definitions for some of the codes. Situations should be described as clearly and briefly as possible, using the same terminology as for normal communication. In order to reduce the amount of radio traffic, some thought should be given to what needs to be communicated before the radio is used.

When communicating patient triage results, the terms 'Immediate', 'Delayed', and 'Dead' -- as taught in the original CERT training classes -- will **NOT** be used. Rather 'Red Tag' (Immediate), 'Yellow Tag' (Delayed), and 'Black Tag' (Dead) will be used instead. This terminology follows that which has been taught in more recent classes. The term 'Green Tag' can be used to describe someone who is mentally and physically able to remove themselves from the danger area.

Batteries

The radio will operate on the rechargeable NiCad battery pack that is supplied with the radio or on three (3) AA batteries. Each of the battery packs has been initially charged for 16 hours. The battery packs can be charged in the radio or separately if the dual-pocket recharger is used. To recharge the battery pack in the radio, remove the plastic insert in either one of the recharger pockets. Place the radio in the pocket so that the electrical contacts on the back of the radio are touching with the contacts in the recharger pocket. To charge the battery pack separately from the radio, leave the plastic insert in the recharger pocket, and place the battery pack in the pocket so that the contacts on the battery pack are touching with the contacts in the recharger pocket.

The battery back—either separately or in the radio—should **NOT** be left in the recharger for extended periods of time. The life of the battery pack is shortened by extended recharging. The battery pack should not be left in the recharger for more than 16 hours; it should be recharged only as needed after use or once per month if not used in order to maintain a full charge.

Radio Settings

Power On/Off and Volume

Turn the black knob on top of the radio clockwise to turn the radio on. Volume is set by how far the knob is rotated. Pressing and holding the Z_mon button on the front of the radio for 3 seconds will allow you to know the current volume setting. Rotate the knob while holding the Z_mon button to set the volume to the desired level. Turn the knob all the way counter-clockwise to turn the radio off.

Setting the channel number

Turn the radio on. Push the Menu button one time. The channel number in the middle of the display will flash. Press the + or – buttons until the desired channel number is displayed. Press the push-to-talk button on the side of the radio to save that channel number.

Setting the subcode number

Turn the radio on. Push the Menu button two times. The subcode number on the right side of the display will flash. Press the + or – buttons until the desired subcode number is displayed. Press the push-to-talk button on the side of the radio to save that subcode number. For rapid scrolling of the number, hold the + or – button down until the desired number is reached.

Scanning channels

With the radio turned on and the channel and subcode set to the desired values for your normal operation—the home channel—press and release the Z_mon button on the front of the radio. The radio will scan through the various channels checking for activity. To respond to a channel during scan, press the push-to-talk button within 5 seconds. To stop scanning, push and release the Z_mon button.

Handsfree Operation

The radio does have a handsfree (iVox) mode. In this mode, the radio detects your voice and transmits when you speak. To activate iVox, turn the radio off, then turn the radio on while pressing the push-to-talk button on the side of the radio. The handsfree operation is turned off when the radio is turned off. The sensitivity level can be set to help prevent unintended noises from triggering a transmission. See pages 28-29 in the user's manual for instructions on setting the sensitivity.

NOAA Weather Channel

The T5950 can receive 8 weather channels broadcast by NOAA. To turn on the NOAA channels, press and hold for 3 seconds the + button on the front of the radio. To turn off the weather channels, turn the radio off or press the + button for 3 seconds. Transmission on the weather channel in the Fairfax area is on NOAA Channel 1. **NOTE: Channel scanning or two-way communication cannot be done while the radio is set to a weather channel.**

Alert Call

To send a tone to all radios on the current channel and subcode, press the button on the front of the radio that looks like a music symbol.

Lock/Unlock

The channels and subcodes on the CERT radios can be locked to prevent accidental changing of those values. When the radio is locked, a small icon of a lock appears in the middle of the display at the top, just above the channel number. When the radio is locked, neither the channel nor the subcode can be changed. If the icon is not present, the channel and subcode can be changed as described above. To change the radio's status from LOCK to UNLOCK, press and hold the Menu button until the lock icon disappears (about 3 seconds). The same procedure is used to change the status from UNLOCK to LOCK—press and hold the Menu button until the lock icon appears. In the locked mode, the radio **cannot** be set to the NOAA weather channel.